

IRRIGATION EFFICIENCY PROGRAM

SECTION 1: General Information

Purpose

Denver Water (DW) is a public water supply utility serving industrial, commercial and residential customers in Denver, Colorado, and portions of the surrounding metropolitan area. As part of a commitment to our customers, DW is seeking to minimize future costs of expanding its system capacity by continuing to develop Demand Side Management (DSM) resources.

DW is now seeking proposals from businesses to participate in a DSM program. DSM measures are being sought through this Request for Proposal (RFP) for products and/or services that save water by increasing irrigation efficiency and improving landscape practices.

This RFP outlines the scope of work desired, the acceptable products and services, the required statement of qualifications needed from each successful bidder, types of proposals that are not acceptable, scoring criteria for proposals, pre-proposal meetings, verification and award payment descriptions, and timeframes of any project.

DW is seeking long term, reliable water savings from this solicitation. Each proposal should offer a minimum of 3 acre-feet of long-term savings, or approximately 1,000,000 gallons per year. (One acre-foot of water is equal to 325,900 gallons)

Background

This irrigation efficiency initiative is part of Denver Water's strategy to meet future water demands. The Denver metro area is located in a semi-arid plain and receives an average of 15 inches of precipitation per year. However, only 10.5 inches fall during the

typical landscaping season. Denver Water serves a population of approximately 1,200,000. The majority of accounts are single-family residential households. Approximately 45% of annual water production is applied to landscape irrigation.

Studies done within the DW service area indicate that landscapes are over-irrigated by approximately 20-30% based on Kentucky Bluegrass needs. The greatest inefficiency is associated with automatic in-ground irrigation systems. Inefficient irrigation is one of the targets of this RFP. Another objective of this RFP is to demonstrate alternative landscaping techniques or landscaping methods that reduce water requirements below Kentucky Bluegrass needs.

Scope of Work

The firm or firms (Bidders) submitting proposals for Denver Water's Irrigation Efficiency Program should bring together a total package designed to reduce waste in landscape irrigation or to decrease watering needs for landscapes.

The package described in the proposal should specify how irrigation savings are to be achieved, how the technology or techniques will be implemented, and at what cost. This should include a thorough plan to accomplish water savings, the method of implementing this plan, the technique for monitoring savings, the means for maintaining savings over time, and how the plan will be financed. Details of the plan requirements are further described in subsequent sections.

In this proposal, Bidders should explain what partnership role Denver Water would have. DW's goal with this program is to pay only for documented, long-term water savings. DW will consider such roles as cost sharing for demonstrations, assistance in soliciting participants, conducting surveys, and other partnership arrangements.

Product or Service Description

In order to be considered, proposals must contain the following information.

- Description of product or service.
- Target audience of proposal (i.e. single-family residential, large landscape sites, automatic sprinkler systems, etc.)
- Amount of water savings projected.
- Expected life of product or service, and any savings degradation expected.
- All life cycle costs associated with proposal, including those borne by customers.
- Any potential limiting factors associated with the product or service.
- Description of how the implementation of the proposal will be financed.

Statement of Qualifications

For DW to determine if a proposal will be eligible, each bidder must include the following information:

- Name of company responding to this RFP.
- Length of time in business.
- List of references, including names, current phone numbers and e-mail addresses of contact persons.
- Bonding agent and bonding capacity.

- Education and experience of each of the individuals who will be working on this project.
- Past experience with similar projects. (Include project description, completion date, location, measurable results and contacts).
- Types of services offered by the proposing companies.
- An annual report, if the proposing company is a publicly traded entity.

Terms And Conditions

This RFP is open to all parties that have proposals for improving irrigation efficiency within the Denver Water service area. Appendix F is a map of the Denver Water service area showing those boundaries.

Selected proposals must be implemented within the Denver treated water service area.

This RFP does not commit DW to award a contract. DW will not pay any costs incurred in the preparation of a proposal in response to this RFP. DW reserves the right to modify or withdraw this RFP, to negotiate with qualified Bidders, to reject any and all responses, and to terminate negotiations at any time.

All proposals are to be received and reviewed by the Irrigation Rating Committee prior to construction of the project.

Proposal Submission

Each bidder must submit one (1) original and four (4) copies of their proposal (please use recyclable materials). Documents must be in a sealed package clearly marked “Irrigation Efficiency Program,” and are to be delivered either in person or by mail addressed to:

Denver Water
c/o Tim LaPan, Landscape Architect
Office of Water Conservation
1600 W. 12th Avenue
Denver, CO 80204-3412

Pre-Proposal Meetings

If meetings are required to clarify information and methodologies, please schedule a pre-proposal meeting by filling out and returning the attached reservation form (Appendix G).

Categories of Proposals

Proposals will likely fall into two categories, those that change the irrigation requirements of landscapes and new technology that would increase irrigation efficiency.

Landscape & Irrigation Proposals – These proposals include such things as rainfall sensors, soil moisture sensors, irrigation controller technologies, reduced turf areas, and demonstrations of the principles of Xeriscape.

New Technology – These proposals are for newly developed products that increase irrigation efficiency. The Review Committee reserves the right to determine eligibility under this category.

Types of Proposals That Are Not Acceptable

The following are not acceptable for this RFP:

1. Rate structures
2. System pressure modification
3. Rocks, weeds, or neglected landscaping proposals that are contrary to the public policy of the City and County of Denver.
4. Training, education and public relations as stand-alone programs.
5. Proposals from employees of Denver Water.

SECTION 2: Proposal Evaluation And Scoring

Description of Scoring Method

The goal of the scoring method will be to evaluate potential irrigation water savings proposals. The following scoring criteria will be used to rank proposals.

Completeness

Proposal will be rated on the completeness of the plan. The proposal must answer all the questions outlined in the sections entitled “Products or Services Description” and “Statement of Qualifications.” Included in this category will be the adequacy of the business plan, the accuracy of engineering calculations and all supporting documentation. Verification methods must be approved by Denver Water.

Savings Amount

Proposals will be rated on the amount of annual water savings that are projected. Both average-year savings and dry-year savings will be considered. Savings that will occur naturally should not be included. For individual site proposals, the past irrigation efficiency of the site will be considered.

Savings Dependability

DW is looking for long-term water savings associated with these proposals and is interested in demand reductions that are lasting. Proposals must include an explanation of how long the savings are likely to last as well as any expected degradation over time. Proposals that project a long life expectancy will receive a higher rating.

Cost to Denver Water

Under this category, the cost to DW (\$ per 1000 gallons) will be rated and compared to other water supply options. Projects that produce water savings at a lower cost to DW will receive a higher rating.

Cost/Benefit to Customers

The cost of the proposed projects along with the benefits received by customers of DW should be addressed in this category. Those projects having a higher benefit to customers at a lower cost will be given higher ratings.

Landscape and Irrigation Criteria

All proposals will be scored on the ability of the proposal to incorporate both irrigation technology and landscape modification to ensure a site can provide sustained savings. All of the specific criteria listed below will contribute to the overall acceptability of the project:

Efficient Irrigation

1. Upgraded Controller
2. ET Controller
3. Central Control
4. Sensors (Rain, Soil Moisture)
5. Zoned by plant water requirements
6. Seasonal Run-Time Schedule provided

7. Low-angle nozzles
8. Subsurface Dripline

Landscape

1. Reduced turf (minimum 25% of existing)
2. Soil amendment (minimum 3cy/1,000 sq.ft. tilled to 6" depth)
3. Xeric plant material
4. Seasonal maintenance schedule provided

New Technology

This RFP is not intended to make Denver Water a testing laboratory. The rating committee is looking for viable products that will be marketed to retail or wholesale customers to help them achieve reliable, long-term water savings.

Experience and Company Strength

Qualifications and experience of Bidder will be considered in this category, including financial capabilities and financial stability.

Marketing Approach

The feasibility and potential effectiveness of the marketing approach will be evaluated. DW is interested in programs that have solid marketing plans and that have reasonable approaches for customers, as well as follow-up services.

Administration

Bidders should have reliable, solid systems for tracking and reporting customer contacts, installations, savings and services.

Overall Feasibility

The technical feasibility of any proposal will be considered to see if it is viable.

Irrigation Rating Committee

All proposals will be rated by Denver Water's rating committee. Decisions of the committee are final.

SECTION 3: Verification and Award Payment

Process

Bidders should submit plans for verification of water savings from the conservation measures in their proposal. Depending on the proposal, different methodologies may be applicable to measure water savings. Verification Plan considerations are listed in Appendix E. DW will make the final determination on which verification methods are acceptable. The verification plan should include, but is not limited to, the following considerations:

Project Description

The Verification Plan should include a description of the conservation measure and the target audience, a discussion of how this group will be reached, and how the conservation measure will affect customer usage patterns. Factors that could affect the persistence and life expectancy of the water savings should be identified. This should also include methods of identifying customers impacted by the conservation proposal and a discussion of how actual vs. expected participation rates will be determined. Any known environmental impacts, both positive and negative, from the measure should be addressed.

Baseline Determination

The Verification Plan should include a method of determining existing conditions before the installation of the conservation measure. Denver Water must approve any method of determining baseline water use.

Weather Adjustments

Baseline water use must include a method of adjustment for weather factors. Variations in weather patterns can greatly affect irrigation water use on a given site. To adjust for those variables, this average must be adjusted retrospectively each year by a weather factor. Denver Water will determine a weather factor by analyzing a group of 800+ irrigation-only accounts to determine an annual adjustment factor. Water use restrictions and drought surcharges can also impact this annual adjustment. A synopsis is included in Appendix E. Each year will have a different factor.

Water Use Measurement

The Bidders will be responsible for determination of water use on any given site. Water-use baseline measurement may include, but is not limited to, pre- and post-installation metering. Metering is the preferred method of measuring usage. However, since most applications do not have a history of separately metered irrigation water usage, baseline usage can also be estimated. If it is estimated, DW must approve the basis for the estimate.

Post-Installation Site Inspection

After DW has reviewed and accepted the Bidder's proposal and the measure is installed and operating, a Post-Installation Site Inspection will be performed. This will be used to determine the start date for the verification period.

Verification Method

The verification method should include a means for distinguishing the “before and after” effects on irrigation water use associated with the measure. Projects that ultimately are accepted will be those that provide the most cost-effective and long-lasting savings. Annual water savings will be determined after the completion of each irrigation season, typically in the 1st quarter of the following year. Savings will be determined based on agreed-upon verification methods, which should include a way to establish pre- and post-conditions, a method of adjusting for weather-related conditions, and other significant variables that might influence customer usage. DW must approve the specific verification methodology.

Levels of Payment

Payments will be based on documented savings, and they will be made after the completion of an irrigation season and verification of savings by DW. The permanence of the savings and historic irrigation efficiency will be major factors in determining the amount of payments and how payments will be made. Payment levels will be negotiated, based on the proposed program and its approved verification method. Denver Water is offering a one-time payment of up to \$4,500 per acre-foot for savings. This amount will be considered only when proposals convey a high confidence level of permanent savings. Payments will be pro-rated over a number of years, to assure DW of the permanence of the savings and to eliminate paying for the same saved water twice.

On-going Verification

The Verification Plan should include a means for determining the persistence of the measure over time. Annual irrigation water use reports may be required for up to ten years. These reports will be based on information obtained from the monitoring method approved in the verification plan. On-site inspections may be conducted annually. A means of tracking the costs incurred by customers affected by the proposal should be included, including ongoing maintenance and replacement costs of the measure.

Proposal Check-list

All proposals should include the following items:

- ☐ Project Description.
- ☐ Statement of Qualifications.
- ☐ Project Team Description and References.
- ☐ Financial Plan.
- ☐ Marketing Plan.

SECTION 4: Summary and Conclusion

Denver Water is interested in achieving water savings while maintaining attractive landscapes in the community. All proposals meeting the criteria will be seriously considered because of the wide variety of potential approaches to outdoor water savings,

Denver Water anticipates that specific details concerning payment schedules and measurement of savings will need to be negotiated on an individual basis.

There is no deadline at present for receiving proposals. Evaluations of proposals will be done on a quarterly basis.

Irrigation Efficiency Request for Proposals Appendices

- A. List of Denver Water Distributors**
- B. Rate Structure for Denver (Jan. 1, 2005)**
- C. Annual Precipitation History Chart (Apr. 15 - Oct. 15)**
- D. Typical Water Usage Graphs**
- E. Monitoring and Verification Methodology**
- F. Map of Denver Water Service Area**
- G. Pre-Proposal Meeting Reservation**

Appendix A

List of Denver Water Distributors

District	Address	City, State	Zip
Alameda W&S District	359 S. Harlan St.	Lakewood, CO	80226
Bancroft-Clover W&S District	900 S. Wadsworth Blvd.	Lakewood, CO	80226-4398
Bonvue W&S District	225 South Hoyt Street	Lakewood, CO	80226
Bow-Mar W&S District	8739 W. Coal Mine Ave.	Littleton, CO	80123
Cherry Creek Valley W&S District	8501 E. Iliff Ave.	Denver, CO	80231
Cherry Creek Village Water District	6399 S. Fiddler's Green Cir., Ste. 102	Greenwood Village, CO	80111-4974
Consolidated Mutual Water Company	12700 W. 27th Avenue	Lakewood, CO	80215
Crestview W&S District	P. O. Box 21299	Denver, CO	80221-0299
Douglas County Metro. District	9 Vista Road	Englewood	80110
Edgewater, City of	2401 Sheridan Blvd.	Edgewater, CO	80214
Glendale, City of	4360 E. Virginia Ave.	Glendale, CO	80246
Green Mountain W&S District	13919 W. Utah Ave.	Lakewood, CO	80228
High View Water District	1002 Kipling St.	Lakewood, CO	80215-4617
Ken-Caryl Ranch W&S District	10698 Centennial Rd.	Littleton, CO	80127
Lakehurst W&S District	7995 W. Quincy Ave.	Littleton, CO	80123-1319
Lakewood, City of	480 S. Allison Pkwy., Civic Center N	Lakewood, CO	80226-3127
Meadowbrook Water District	P. O. Box 621084	Littleton, CO	80162-1084
North Pecos W&S District	6900 N. Pecos St.	Denver, CO	80221
North Washington St. W&S District	3172 E. 78th Ave.	Denver, CO	80229-6120
Northgate Water District	6856 N. Federal Blvd.	Denver, CO	80221
South Adams County W&S District	P.O. Box 597	Commerce City, CO	80037-0597
Valley Water District	12101 W. 52nd Ave.	Wheat Ridge, CO	80034
Wheat Ridge Water District	P. O. Box 637	Wheat Ridge, CO	80034-0637
Willowbrook W&S District	9850-B W. Girton Dr.	Lakewood, CO	80227
Willows Water District	6930 S. Holly Cir.	Centennial, CO	80112
Bear Creek W&S District	2517 S. Flower St.	Lakewood, CO	80227-2912
Berkeley W&S District	4455 W. 58th Avenue, Unit A	Arvada, CO	80002
Colorado Dept. of Natural Resources	11500 N. Roxborough Park Rd.	Littleton, CO	80125
Country Homes Metropolitan District	390 Union Blvd., Ste. 400	Denver, CO	80228-1556
East Cherry Hills Water District	4 Parkway Drive	Englewood, CO	80110
Lockheed Martin Space System Company	P.O. Box 179, Mail Stop S-9550	Denver, CO	80201-0179
North Lincoln W&S District	5353 W. Dartmouth Ave., Ste. 402	Denver, CO	80227
Phillips Petroleum Company	3960 E. 56th Ave.	Commerce City, CO	80022
Platte Canyon W&S District	8739 W. Coal Mine Ave.	Littleton, CO	80123
S. Sheridan Wtr.Swr.& Strm.Drng.Dist	6399 S. Fiddlers Green Circle, #102	Greenwood Village, CO	80111
Southgate Water District	3722 E. Orchard Rd.	Centennial, CO	80121
Southwest Metropolitan W&S District	8739 W. Coal Mine Ave.	Littleton, CO	80123-4001
Suncor Energy	5801 Brighton Blvd.	Commerce City, CO	80022
Willows Water District	6930 S. Holly Cir.	Centennial, CO	80112
Arapahoe Estates Water District	4122 S. Parker Rd.	Aurora, CO	80014
Bennett Bear Creek Farm W&S District	P. O. Box 840	Morrison, CO	80465
Brookridge Heights W&S District	5395 South Grant Street	Littleton, CO	80121
Charlou Park Water District	4599 S. Dasa Dr.	Englewood, CO	80111
Cherry Hills Heights W&S District	3490 S. Clayton Blvd.	Englewood, CO	80110
Cherry Hills North W&S District	PO Box 3110	Parker, CO	80134
Cherry Hills Village, City of	2450 E. Quincy Ave.	Cherry Hills Village, CO	80113
Colorado Academy	3800 S. Pierce St.	Denver, CO	80235
Columbine W&S District	6412 S. Quebec St.	Englewood, CO	80111
Devonshire Heights W&S District	39 Sedgwick Dr.	Englewood, CO	80113-4109
Fehlmann Subdivision Water Assn.	7225 W. Vassar Ave.	Lakewood, CO	80227
Galleria Metropolitan District	6399 S. Fiddler's Green Cir., Ste. 102	Greenwood Village, CO	80111-4974

District	Address	City, State	Zip
Grant W&S District	2922 Evergreen Pkwy., Ste. 207	Evergreen, CO	80439
Greenwood Village, City of	10001 E. Costilla Ave.	Greenwood Village, CO	80112-3730
Havana W&S District	6399 S. Fiddler's Green Cir., Ste. 102	Greenwood Village, CO	80111-4974
HI-LIN W&S District	2321 S. Krameria St.	Denver, CO	80222
Hillcrest W&S District	6399 S. Fiddler's Green Cir., Ste. 102	Greenwood Village, CO	80111-4974
Holly Hills W&S District	141 Union Blvd., Ste. 150	Lakewood, CO	80228
Holly Mutual Water Company	633 17th Street, Ste. 2200	Denver, CO	80202
Littleton, City of	2255 W. Berry Ave.	Littleton, CO	80165
Lochmoor W&S District	7270 W Radcliff	Littleton, CO	80123
Loretto Heights Re-Sub. Wtr. Assn.	7961 Shaffer Pkwy., #6	Littleton, CO	80127
Panorama Park Water Association	1930 S. Newport St.	Denver, CO	80224
Sheridan, City of	4101 S. Federal Blvd.	Sheridan, CO	80110-4316
South University Place Water Assn.	5460 South Quebec Street, Ste. 110	Greenwood Village, CO	80111
Southeast Englewood Water District	2401 15th Street, Suite 200	Denver, CO	80202-1186
Southwest Plaza Metropolitan District	8501 W. Bowles Ave., #2A-483	Littleton, CO	80123

Appendix B

Rate Schedules

Rate Schedule No. 1 - Inside City
For Bills Dated On or After January 1, 2005

A. Potable Water Consumption Charges:

Single Family Residential Customers:

	<u>Monthly Usage</u> <u>Gallons</u>	<u>Bimonthly Usage</u> <u>Gallons</u>	<u>Rate per</u> <u>1,000 Gallons</u>
Block 1	0 - 11,000	0 - 22,000	\$1.71
Block 2	12,000 - 30,000	23,000 - 60,000	\$2.05
Block 3	Over 30,000	Over 60,000	\$2.57

Small Multi-Family Customers (Duplexes through Five-plexes with a single meter):

Block 1	0 - 15,000	0 - 30,000	\$1.52
Block 2	Over 30,000	Over 30,000	\$1.82

Monthly usage amount increases by 6,000 gallons and bimonthly usage amount increases by 12,000 gallons per additional dwelling unit up to five (5) dwelling units.

All Other Customers:

Winter	\$1.53
Summer	\$1.84

Winter billings include the 1st, 2nd, and 6th bills for bimonthly customers during a calendar year. For monthly customers, the winter billing period includes bills 1 - 4 and bills 11 - 12 during a calendar year. Summer billings include 3rd, 4th, and 5th bills for bimonthly customers during a calendar year. For monthly customers, the summer billing period includes bills 5 - 10 during a calendar year.

B. Service Charge for all Customers:

<u>Meter Size</u>	<u>Monthly</u>	<u>Bimonthly</u>
3/4 Inch	\$4.26	\$8.51
1 Inch	\$7.30	\$14.60
1 1/2 Inch	\$16.09	\$32.19
2 Inch	\$26.00	\$52.01
3 Inch	\$42.60	\$85.20
4 Inch	\$62.71	\$125.41
6 Inch	\$125.32	\$250.64
8 Inch	\$161.52	\$323.03
10 Inch	\$206.34	\$412.69
12 Inch and Above	\$291.77	\$583.53

C. Private Fire Protection Charges

	<u>Monthly</u>	<u>Bimonthly</u>
Fire Hydrant	\$13.71	\$27.43
Sprinkler Systems and Standpipes		
1 Inch	\$3.72	\$7.45
2 Inch	\$6.21	\$12.42
4 Inch	\$9.60	\$19.20
6 Inch	\$13.71	\$27.43
8 Inch	\$24.00	\$48.00
10 Inch	\$34.28	\$68.57
12 Inch	\$54.86	\$109.71
16 Inch	\$137.14	\$274.28

Applicability: All licensees for water use inside the limits of the City and County of Denver. **Private Fire Protection Service:** Applicable to all licensees inside the City and County of Denver.

Payment: Rates for potable water service under this schedule are net. Bills are due and payable to Denver Water upon issuance. Bimonthly bills are delinquent 30 days after the billing date. Monthly bills are delinquent 25 days after the billing date. Late Charges will be assessed per Denver Water policy.

Rates: Charges for potable water service consist of a **consumption charge** and a **service charge**. The consumption charge is based upon the amount of water delivered during the billing period. The service charge applies to all accounts that are "on" at any time during the billing period.

Rate Schedule No. 2 - Outside City - Total Service**For Bills Dated On or After January 1, 2005****A. Potable Water Consumption Charges:****Single Family Residential Customers:**

	Monthly Usage	Bimonthly Usage	Rate per
	<u>Gallons</u>	<u>Gallons</u>	<u>1,000 Gallons</u>
Block 1	0 - 11,000	0 - 22,000	\$2.76
Block 2	12,000 - 30,000	23,000 - 60,000	\$3.31
Block 3	Over 30,000	Over 60,000	\$4.14

Small Multi-Family Customers (Duplexes through Five-plexes with a single meter):

Block 1	0 - 15,000	0 - 30,000	\$2.25
Block 2	Over 30,000	Over 30,000	\$2.70

Monthly usage amount increases by 6,000 gallons and bimonthly usage amount increases by 12,000 gallons per additional dwelling unit up to five (5) dwelling units.

All Other Customers:

Winter	\$2.14
Summer	\$2.57

Winter billings include the 1st, 2nd, and 6th bills for bimonthly customers during a calendar year. For monthly customers, the winter billing period includes bills 1 - 4 and bills 11 - 12 during a calendar year. Summer billings include 3rd, 4th, and 5th bills for bimonthly customers during a calendar year. For monthly customers, the summer billing period includes bills 5 - 10 during a calendar year.

B. Service Charge for all Customers:

Meter Size	<u>Monthly</u>	<u>Bimonthly</u>
3/4 Inch	\$4.26	\$8.51
1 Inch	\$7.30	\$14.60
1 1/2 Inch	\$16.09	\$32.19
2 Inch	\$26.00	\$52.01
3 Inch	\$42.60	\$85.20
4 Inch	\$62.71	\$125.41
6 Inch	\$125.32	\$250.64
8 Inch	\$161.52	\$323.03
10 Inch	\$206.34	\$412.69
12 Inch and Above	\$291.77	\$583.53

C. Private Fire Protection Charges

	<u>Monthly</u>	<u>Bimonthly</u>
Fire Hydrant	\$7.51	\$15.03
Sprinkler Systems and Standpipes		
1 Inch	\$2.04	\$4.08
2 Inch	\$3.40	\$6.81
4 Inch	\$5.26	\$10.52
6 Inch	\$7.51	\$15.03
8 Inch	\$13.15	\$26.30
10 Inch	\$18.79	\$37.57
12 Inch	\$30.06	\$60.11
16 Inch	\$75.14	\$150.28

Applicability: All licensees for water use outside the limits of the City and County of Denver served under agreements whereby the Board of Water Commissioners operates and maintains the water system used to supply the licensee water.

Payment: Rates for potable water service under this schedule are net. Bills are due and payable to Denver Water upon issuance. Bimonthly bills are delinquent 30 days after the billing date. Monthly bills are delinquent 25 days after the billing date. Late Charges will be assessed per Denver Water policy.

Rates: Charges for potable water service consist of a **consumption charge** and a **service charge**. The consumption charge is based upon the amount of water delivered during the billing period. The service charge applies to all accounts that are "on" at any time during the billing period.

Rate Schedule No. 3 - Outside City (Read and Bill)**For Bills Dated On or After January 1, 2005****A. Potable Water Consumption Charges:****Single Family Residential Customers:**

	Monthly Usage	Bimonthly Usage	Rate per
	<u>Gallons</u>	<u>Gallons</u>	<u>1,000 Gallons</u>
Block 1	0 - 11,000	0 - 22,000	\$2.28
Block 2	12,000 - 30,000	23,000 - 60,000	\$2.74
Block 3	Over 30,000	Over 60,000	\$3.42

Small Multi-Family Customers (Duplexes through Five-plexes with a single meter):

Block 1	0 - 15,000	0 - 30,000	\$1.98
Block 2	Over 30,000	Over 30,000	\$2.38

Monthly usage amount increases by 6,000 gallons and bimonthly usage amount increases by 12,000 gallons per additional dwelling unit up to five (5) dwelling units.

All Other Customers:

Winter	\$2.00
Summer	\$2.40

Winter billings include the 1st, 2nd, and 6th bills for bimonthly customers during a calendar year. For monthly customers, the winter billing period includes bills 1 - 4 and bills 11 - 12 during a calendar year. Summer billings include 3rd, 4th, and 5th bills for bimonthly customers during a calendar year. For monthly customers, the summer billing period includes bills 5 - 10 during a calendar year.

B. Service Charge for all Customers:

Meter Size	<u>Monthly</u>	<u>Bimonthly</u>
3/4 Inch	\$4.26	\$8.51
1 Inch	\$7.30	\$14.60
1 1/2 Inch	\$16.09	\$32.19
2 Inch	\$26.00	\$52.01
3 Inch	\$42.60	\$85.20
4 Inch	\$62.71	\$125.41
6 Inch	\$125.32	\$250.64
8 Inch	\$161.52	\$323.03
10 Inch	\$206.34	\$412.69
12 Inch and Above	\$291.77	\$583.53

C. Private Fire Protection Charges

	<u>Monthly</u>	<u>Bimonthly</u>
Fire Hydrant	\$5.63	\$11.25
Sprinkler Systems and Standpipes		
1 Inch	\$1.53	\$3.06
2 Inch	\$2.55	\$5.10
4 Inch	\$3.94	\$7.88
6 Inch	\$5.63	\$11.25
8 Inch	\$9.85	\$19.69
10 Inch	\$14.07	\$28.13
12 Inch	\$22.50	\$45.01
16 Inch	\$56.26	\$112.52

Applicability: All licensees for water use outside the limits of the City and County of Denver served under agreements whereby the Distributor in some manner operates and maintains portions of the water system used to supply the licensee and the Board of Water Commissioners is responsible for billing each licensee on an individual basis.

Payment: Rates for potable water service under this schedule are net. Bills are due and payable to Denver Water upon issuance. Bimonthly bills are delinquent 30 days after the billing date. Monthly bills are delinquent 25 days after the billing date. Late Charges will be assessed per Denver Water policy.

Rates: Charges for potable water service consist of a consumption charge and a service charge. The consumption charge is based upon the amount of water delivered during the billing period. The service charge applies to all accounts that are "on" at any time during the billing period.

Rate Schedule No. 4 - Outside City
Wholesale (Master Meter)
For Bills Dated On or After January 1, 2005

A. Potable Water Consumption Charges:

Rate per
1,000 Gallons
\$2.20

All Consumption

B. Service Charge:

Meter Size	<u>Monthly</u>	<u>Bimonthly</u>
3/4 Inch	\$4.26	\$8.51
1 Inch	\$7.30	\$14.60
1 1/2 Inch	\$16.09	\$32.19
2 Inch	\$26.00	\$52.01
3 Inch	\$42.60	\$85.20
4 Inch	\$62.71	\$125.41
6 Inch	\$125.32	\$250.64
8 Inch	\$161.52	\$323.03
10 Inch	\$206.34	\$412.69
12 Inch and Above	\$291.77	\$583.53

Applicability: Municipalities, quasi-municipal districts and water companies outside the limits of the City and County of Denver served under agreements where the municipality, quasi-municipality and water companies operate and maintain water systems to supply individual licensees. The Board of Water Commissioners bills the Distributor for water delivered through "Master Meters." The Distributors establish the rates for its licensees.

Payment: Rates for potable water service under this rate schedule are net. Bills are prepared on a monthly basis and are due and payable to Denver Water upon issuance and become delinquent 25 days after the billing date appearing on the billing statement. Late charges will be assessed per Denver Water policy.

Rates: Charges for potable water service consist of a **consumption charge** and a **service charge**. The consumption charge is based upon the amount of water delivered during the billing period. The service charge applies to all accounts that are "on" at any time during the billing period.

Rate Schedule No. 5
Non Potable Water Service
For Bills Dated On or After January 1, 2005

Recycled Water Consumption / Service Charges:

A. Consumption Charge

All Consumption

Rate per 1,000 Gallons

<u>Inside City</u>	<u>Outside City</u>
\$0.69	\$0.83

B. Service Charge:

Meter Size

3/4 Inch

1 Inch

1 1/2 Inch

2 Inch

3 Inch

4 Inch

6 Inch

8 Inch

10 Inch

12 Inch and Above

Monthly

Bimonthly

\$4.26

\$8.51

\$7.30

\$14.60

\$16.09

\$32.19

\$26.00

\$52.01

\$42.60

\$85.20

\$62.71

\$125.41

\$125.32

\$250.64

\$161.52

\$323.03

\$206.34

\$412.69

\$291.77

\$583.53

All Other Non Potable Water Consumption / Service Charges:

A. Consumption Charge

All Consumption

Rate per 1,000 Gallons

<u>Inside City</u>	<u>Outside City</u>
\$0.47	\$0.58

Rate per Acre Foot

<u>Inside City</u>	<u>Outside City</u>
\$153.15	\$189.00

B. Service Charge:

Not Applicable

Arvada Non Potable Water Consumption / Service Charges:

A. Consumption Charge

All Consumption

**Rate per
1,000 Gallons**

\$0.57

**Rate per
Acre Foot**

\$185.73

B. Service Charge:

Not Applicable

Rate Schedule No. 6 - System Development Charges**Effective January 31, 2005**

Applicability: Licenses for single family residential taps within the City and County of Denver and Denver Water Service Areas, including special contracts. System Development Charges are due and payable prior to issuance of a license to the customer.

	Treated Water	
	<u>Inside Denver</u>	<u>Outside Denver</u>
Base charge per residence	\$1,650	\$2,300
Charge per square foot of gross lot size	\$0.37	\$0.52

Applicability: Licenses for multifamily residential taps within the city and County of Denver and Denver Water Service Areas, including special contracts. System Development Charges are due and payable prior to issuance of a license to the customer.

	Treated Water	
	<u>Inside Denver</u>	<u>Outside Denver</u>
Base charge for duplex or first two household units (served through a single tap)	\$6,200	\$8,700
Charge for each additional household unit above two (served through a single tap)	\$1,350	\$1,900

Applicability: Licenses for all other taps within the City and County of Denver and Denver Water Service Areas, including special contracts.* System Development charges are due and payable prior to issuance of a license to the customer.

	Treated Water		Non Potable Water	
<u>Tap Size</u>	<u>Inside Denver</u>	<u>Outside Denver</u>	<u>Inside Denver</u>	<u>Outside Denver</u>
3/4 Inch	\$4,600	\$6,450	\$2,900	\$4,050
1 Inch	\$13,800	\$19,350	\$8,700	\$12,150
1 1/2 Inch	\$27,600	\$38,700	\$23,200	\$32,400
2 Inch	\$41,450	\$58,050	\$37,700	\$52,650
3 Inch	\$101,200	\$141,900	\$63,800	\$89,100
4 Inch	\$179,400	\$251,550	\$95,700	\$133,650
6 Inch	\$308,200	\$432,150	\$197,200	\$275,400
8 Inch	\$414,000	\$580,500	\$255,200	\$356,400
10 Inch	\$524,400	\$735,300	\$327,700	\$457,650
12 Inch	\$639,400	\$896,550	\$466,900	\$652,050

Applicability: Special contracts for fixed volumes of water rather than licenses sold on a per tap basis.

	Treated Water		Non Potable Water	
	<u>Inside Denver</u>	<u>Outside Denver</u>	<u>Inside Denver</u>	<u>Outside Denver</u>
Acre Foot Conversion (\$/AF)				
Inside Combined Service Area	\$10,050	\$14,050	\$6,285	\$8,800
Outside Combined Service Area		\$14,675		\$9,200

***NOTE:** There are several distributor contracts and water service agreements that contain negotiated tap ratio conversions per acre foot and some agreements that contain negotiated, and in some cases, prepaid system development charges. These contracts will continue to be administered utilizing the SDC calculations and/or tap ratio conversions specified in each of these contracts. Tap credit pools shall continue to be administered in a manner consistent with the applicable water service agreement and Operating Rules.

Rate Schedule No. 7 - Outside City
Master Meter Maintenance
For Bills Dated On or After January 1, 2005

A. Potable Water Consumption Charges:

Rate per
1,000 Gallons
\$3.15

All Consumption

B. Service Charge:

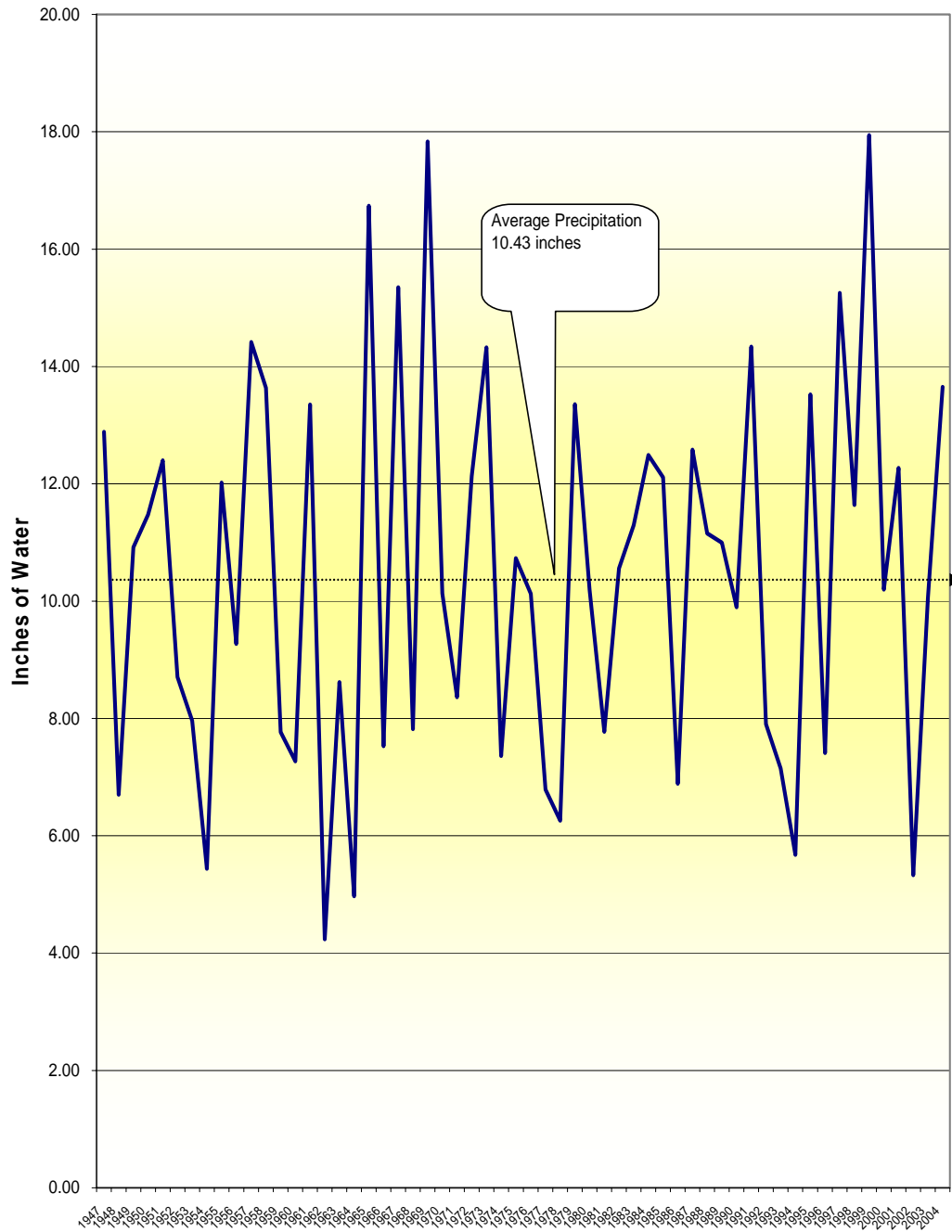
Meter Size	<u>Monthly</u>	<u>Bimonthly</u>
3/4 Inch	\$4.26	\$8.51
1 Inch	\$7.30	\$14.60
1 1/2 Inch	\$16.09	\$32.19
2 Inch	\$26.00	\$52.01
3 Inch	\$42.60	\$85.20
4 Inch	\$62.71	\$125.41
6 Inch	\$125.32	\$250.64
8 Inch	\$161.52	\$323.03
10 Inch	\$206.34	\$412.69
12 Inch and Above	\$291.77	\$583.53

Applicability: A variation of the standard Master Meter Contract, in which a Master Meter Distributor elects to continue customer billing and collection functions within its service area but contracts with Denver Water to operate, maintain and replace its water system as needed. Denver Water will bill the Distributor through master meters at a special rate that reflects the cost of providing this level of service.

Payment: Rates for potable water service under this rate schedule are net. Bills are prepared on a monthly basis and are due and payable to Denver Water upon issuance and become delinquent 25 days after the billing date appearing on the billing statement. Late charges will be assessed per Denver Water policy.

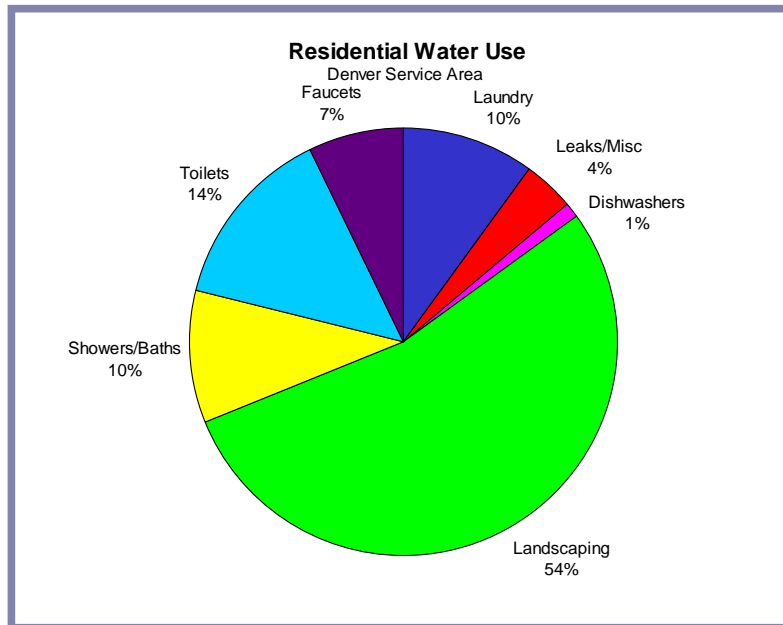
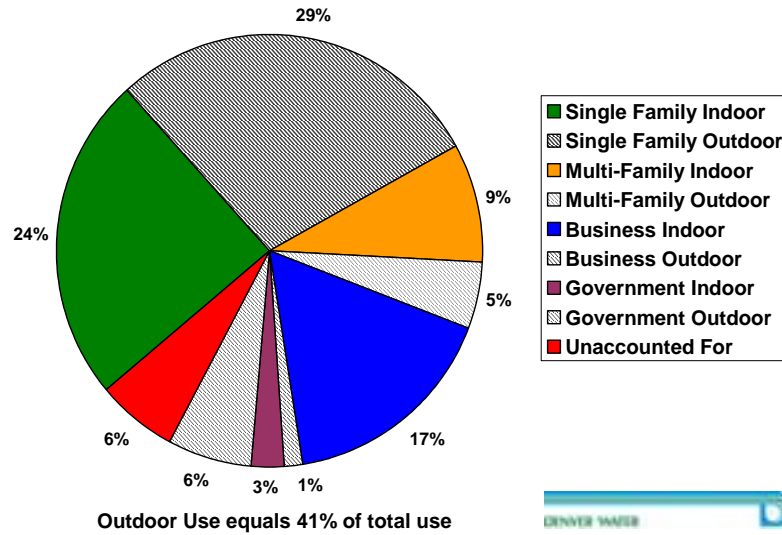
Rates: Charges for potable water service consist of a **consumption charge** and a **service charge**. The consumption charge is based upon the amount of water delivered during the billing period. The service charge applies to all accounts that are "on" at any time during the billing period.

Appendix C
Annual Precipitation Chart
April 15 - October 15, 1947-2004



Appendix D Typical Water Usage Graphs

Water Use by Category



Appendix E

Monitoring & Verification Methodology

Irrigation usage varies widely from year to year for a variety of reasons. These include various weather factors, rate increases, drought restrictions and surcharges. Denver Water's goal with our savings verification plan is to pay for *only* the savings associated with the product or service. We do not want to pay for savings that occur because of a wet or drought-restricted year, nor do we want to punish Bidders for the impacts of a dry year. To assure Denver Water that water savings are reliable over time, savings are tracked over a 4- to 5-year period, with payments pro-rated over that time period.

The methodology used to calculate irrigation savings for the Irrigation Efficiency Program has proven to be an effective way to assure that Denver Water is paying only for actual savings associated with a given project. This methodology utilizes a control group of irrigation-only accounts to make an annual adjustment to project irrigation, as discussed in the following paragraphs.

If a project site has combined usage on its meters, both indoor and outdoor, then irrigation is calculated by subtracting winter baseline usage from total annual water use. The winter baseline is typically calculated by selecting a 4-month non-irrigation period and pro-rating that average monthly amount over the entire year, to arrive at total annual indoor water use. The Annual Irrigation Usage is considered to be Annual Total Site Water Use less the calculated Annual Indoor Water Use.

Baseline irrigation usage is established for each project site, typically using 3 to 5 years of irrigation history. This is considered to be the Base Irrigation for the site. Irrigation in a test year is subtracted from the baseline irrigation to arrive at an un-adjusted savings figure. That amount must then be adjusted up or down to compensate for what would have occurred anyway.

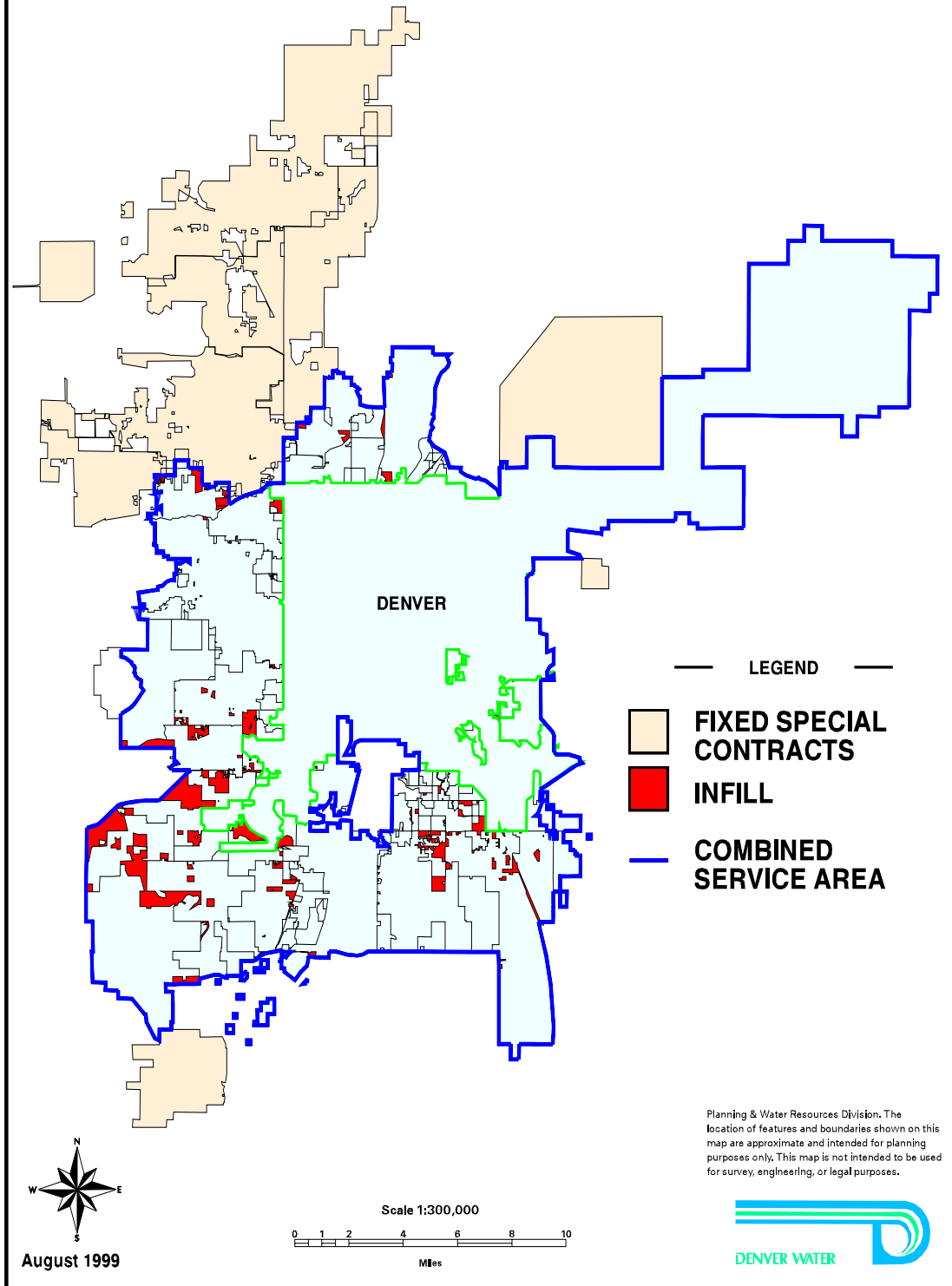
A control group of approximately 800 irrigation-only accounts is used to make the annual adjustment to project irrigation usage. The control group will use the same base years as the project site to determine baseline use for the control group. Current year irrigation is then compared to the baseline usage to determine the % change (+ or -) for the control group. That % change is considered to be the Annual Adjustment Factor.

The Annual Adjustment Factor is then applied to the un-adjusted savings to arrive at the Adjusted Irrigation for the project site. Base Irrigation less the Adjusted Irrigation is considered to be the Savings for each test year. Calculations are summarized below:

- *Base Irrigation* = Average irrigation at site (3-5 year average)
- *Annual Irrigation* = Irrigation at site for test year
- *Annual Adjustment Factor* = Current year irrigation / same 3-5 yr. baseline irrigation. (control group)
- *Adjusted Irrigation* = Annual Irrigation / Annual Adjustment Factor
- *Savings* = Base Irrigation – Adjusted Irrigation

The annual payment is calculated by converting annual savings to acre-feet, multiplying that by the dollar per acre-foot in the contract, and dividing that by the number of years in the verification period.

Denver Water's Primary Service Obligations



Appendix G
Pre-Proposal Meeting Reservation
Irrigation Efficiency Program

COMPANY NAME _____

CONTACT _____

ADDRESS _____

CITY, STATE _____, _____ **ZIP** _____

PHONE _____

FAX _____

E-MAIL _____

SEND NOTIFICATION _____ **(mail, fax or E-mail)**

Denver Water will notify you of the specific date, time and location of the meeting.
Meeting notification will be sent by your choice of correspondence. Return receipt must
be accepted upon opening e-mail notification.

Send Pre-Proposal Reservation to:

Denver Water
1600 W. 12th Ave.
Denver, CO 80204-3412
Attention: Tim LaPan, Irrigation Efficiency Program

For more information:

tel: (303) 628-6327

fax: (303) 628-6349

e-mail: tim.lapan@denverwater.org